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ABSTRACT

An exemplary prekindergarten television program, developed by the Brownsville, Texas Independent School District, is described. The program, intended for Spanish-speaking four-year-olds, is an alternative to providing an in-school program necessitating classrooms, teaching staff, materials, and equipment. The program prepares students for formal schooling, promotes parent participation, emphasizes the importance of education, and promotes maximum language development in both Spanish and English. The unique requirement of the program is parent participation. Parents and children attend the viewing of an instructional videotape and then are grouped separately; aides reinforce the lesson's objectives with the children while other aides discuss the lesson with parents and demonstrate at-home enrichment activities. Each videotape has three components: a lesson, storytelling, and a home activity. A video character acts as a friend to the children and elicits responses and questions during the viewing. The program's effectiveness is illustrated by increased attendance in subsequent regular classes, improved performance on standardized tests, and higher than average performance in subsequent grades among program participants. Sample one-week children's and parents' lesson plans, the instructional television schedule, a list of lessons, and a list of television network participating stations are included. (MSE)

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EL ARCO IRIS A Bilingual Prekindergarten Instructional Television Project

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El Arco Iris
(The Rainbow)

Bilingual Prekindergarten Instructional Television (ITV) Project

Brownsville
Independent School District
Brownsville, Texas

An exemplary program selected for the Demonstration Programs for School Improvement (DPSI) Network by Texas Education Agency

FL 015732

Program Highlights

- Promotes maximum language development in both English and Spanish
- Combines educational techniques with technology—instructional television—to create an effective teaching tool
- Encourages imagination, builds self-confidence, and enhances a child's basic desire to learn
- Emphasizes the importance of parent support in the early education of their children
- Enables school districts to offer a preschool program without sacrificing a teacher or classroom

Children are prepared for formal schooling by developing

- expression of thoughts and feelings
- basic skills
- community awareness
- a positive attitude toward school

Parents become teachers of their children by developing

- ideas for constructing visual aids
- methods for using materials that enrich home activities
- techniques for improving language skills
- curriculum knowledge
- leadership skills
- parenting skills

Target Population

Four-year-olds and their parents, whose primary language is Spanish.

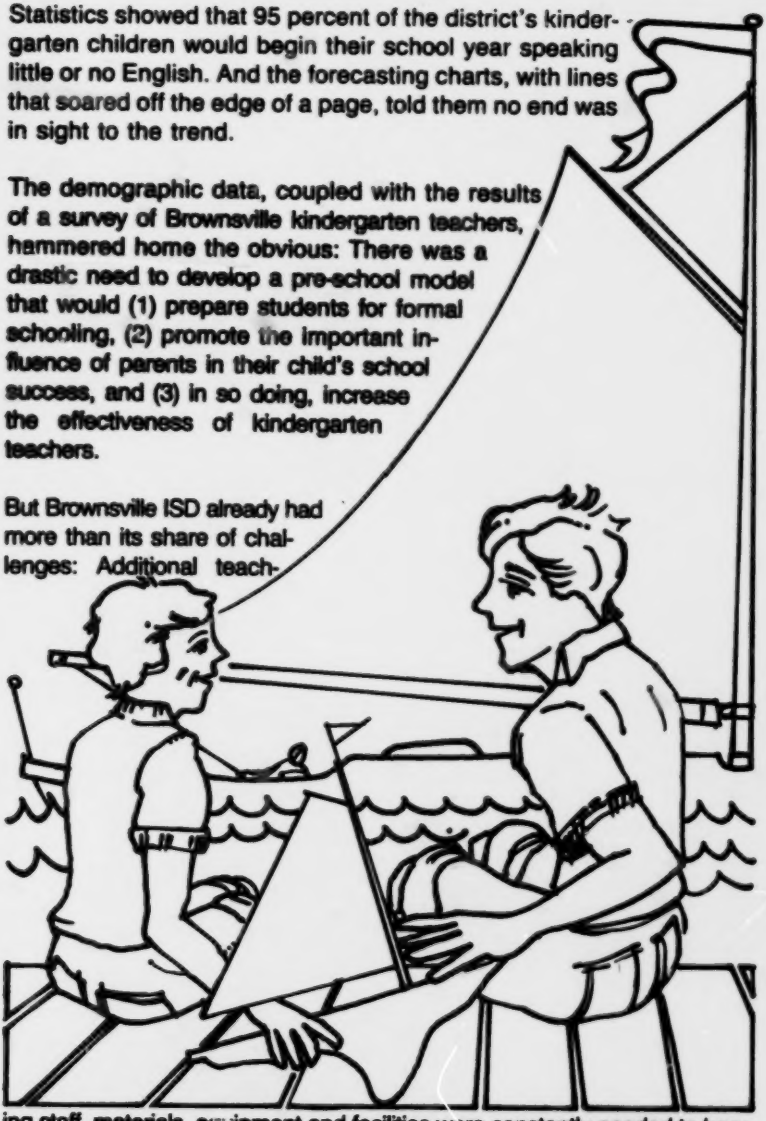
Background

They smile about it now, but back in 1980 Brownsville ISD administrators admit they found the demographic data startling.

Statistics showed that 95 percent of the district's kindergarten children would begin their school year speaking little or no English. And the forecasting charts, with lines that soared off the edge of a page, told them no end was in sight to the trend.

The demographic data, coupled with the results of a survey of Brownsville kindergarten teachers, hammered home the obvious: There was a drastic need to develop a pre-school model that would (1) prepare students for formal schooling, (2) promote the important influence of parents in their child's school success, and (3) in so doing, increase the effectiveness of kindergarten teachers.

But Brownsville ISD already had more than its share of challenges: Additional teaching staff, materials, equipment and facilities were constantly needed to keep pace with its burgeoning school population. To deal with the problem, Brownsville ISD opted not for a traditional preschool program, but for an alternative, innovative program that was effective, yet affordable. El Arco Iris was the result.



The Program

A singular requirement of El Arco Iris is strong parent participation. If parents or a relative do not attend class, neither do their children. Together, parents and children view major parts of an instructional videotape, then are grouped separately. Two instructional aides work together as a closely coordinated team. One aide reinforces the objectives of the lesson with students.

The other works with parents to discuss the lesson and demonstrate at-home enrichment activities.

Each videotape has three components: lesson, storytelling, and home activity. A video character, Jack-in-a-Box, acts as a friend to the children, stimulating their imagination and reinforcing concepts. In addition, puppets, games, puzzles, musical instruments and other colorful materials help children savor the televised lesson. Rather than being a passive activity, instructional television is used to spark questioning and conversation as the videotape is aired.

During the 1984-85 school year, the project included some 500 students and their parents, 16 instructional aides and a program coordinator. The project has produced 75 videotapes.

Evidence of Effectiveness

The average attendance of El Arco Iris students ranged from 58 to 70 hours per school year, as indicated in Figure 1. Students with more than 12 hours of instruction improved significantly in both English and Spanish reading readiness, as measured by the Comprehensive Preschool Inventory (CPI). Results of the test, which assesses language development and general cognitive skills and concepts among three- to five-year-olds, are recorded in Figure 2. Program graduates who have completed first and second grade average higher normal curve equivalent (NCE) levels in reading and math than other students on their campuses and in the district. Results, based on the Comprehensive Test of Basic Skills (CTBS) administered in both English and Spanish, are depicted graphically in Figures 3 and 4.

Figure 1

Average Hours Participation For Prek Children

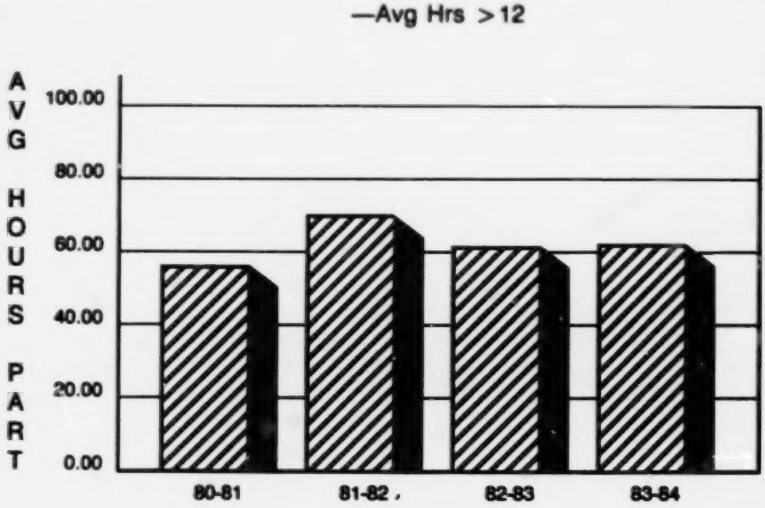


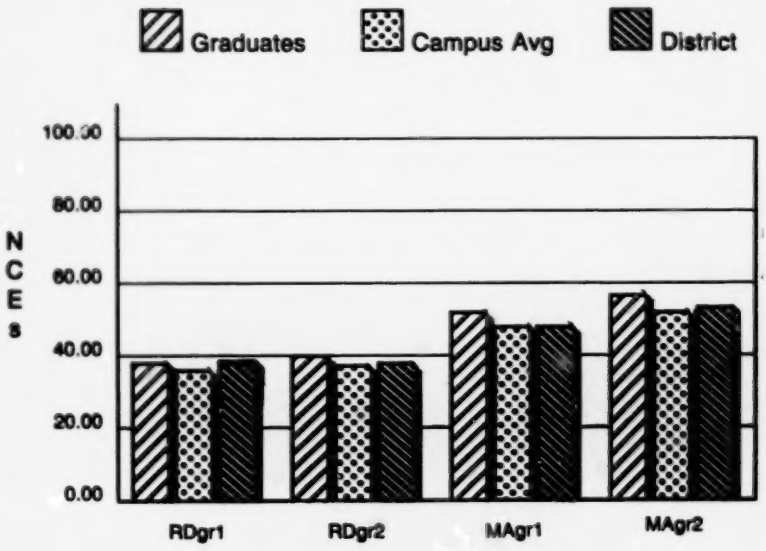
Figure 2

Comprehensive Preschool Inventory Pretest and Posttest Raw Scores Participants With More Than 12 Hours Instruction

Year	1983-84		1982-83	
	English	Spanish	English	Spanish
Pretest	28.68	25.28	6.28	22.25
Posttest	49.07	47.29	28.28	41.42
Gains	20.39	22.01	22.00	19.17

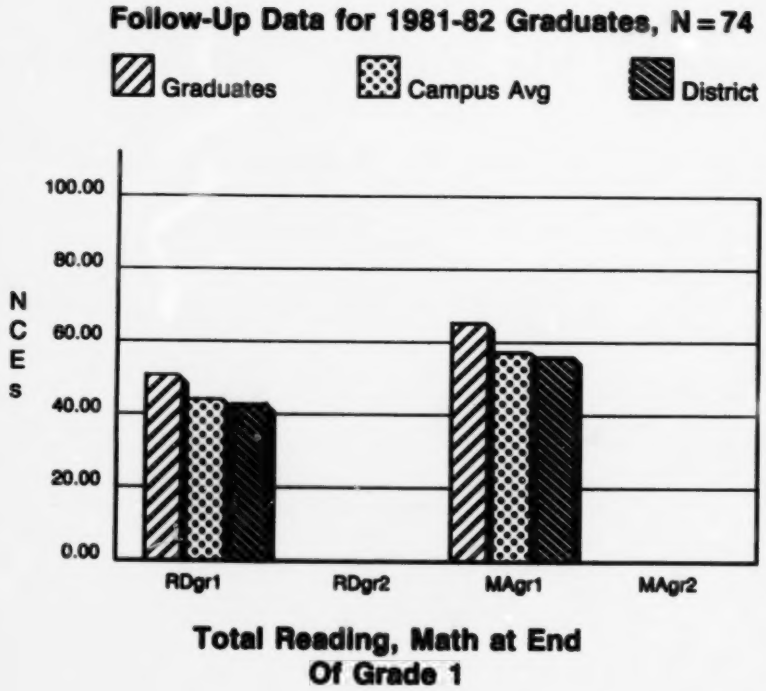
Figure 3

Follow-Up Data for 1980-81 Graduates, N = 154



Total Reading, Math At End Of Grade 1, Grade 2

Figure 4



Total Reading, Math at End Of Grade 1

El Arco Iris

Bilingual Prekindergarten
Instructional Television (ITV) Project
Student Gains

Conclusion 1:

El Arco Iris works as an instructional system.

Conclusion 2:

El Arco students demonstrate the attainment of progressively complex language and math readiness skills.

Conclusion 3:

El Arco students gain a significant advantage in English and Spanish readiness compared to nonparticipants.

Conclusion 4:

El Arco graduates who have completed first and second grade outscore their counterparts in the district and on their target campuses on both the CTBS Total Reading and Total Math tests.

Conclusion 5:

There is evidence that the project provides participants with both cognitive and affective benefits that are sustained into their kindergarten school year.

Conclusion 6:

El Arco parents are uniformly enthusiastic about the project, citing benefits to their children and to themselves.

Implementation Requirements

A minimum level of replication requires

(1) Parent participation

(2) Two instructional aides or parents for each class of 22 children

(Continued on page 15.)

Sample One-Week Plan of Children's Lessons

Time	Monday/Tuesday
11 min.	I. **View Videotape** *My School and Classroom Environment*—Videotape #1A
2 min.	II. **Review Videotape** Ask questions such as: 1. Can you say the name of the teacher? 2. What is the name of Mrs. Perez's friend? 3. Who is Jack? 4. What are some of the objects Mrs. Perez showed you that are found in a classroom?
10 min.	III. **Reinforce Song, Fingerplay/Concept Presented** The song presented in this lesson is called *Mi Escuelita,* sung to the tune of *La Cucaracha.*
15 min.	IV. **Spanish Language Lesson Presentation** Instructional aide and students introduce themselves and then play a learning game. The children are also asked to listen for their name and respond by standing.
15 min.	V. **English as a Second Language** Students are presented the sentence pattern: What's your name? My name is _____ . *YES,* Book A, page 3, Introduction, Teacher's Guide, Addison-Wesley Company.
15 min.	VI. **Provide Reinforcement/Follow-up Activity** Play a game with the song *?Que Es Tu Nombre?* Repeat activity in the videotape. Allow the child to take items out of a bag and name them.
18 min.	VII.-IX.

Sample One-Week Plan of Children's Lessons

Wednesday/Thursday	Time
I. **View Videotape** *Mi Familia*—Videotape #6A	25 min.
II. **Review Videotape** Ask questions such as: 1. Who are some of the people who make up a family? 2. Can you tell what kinds of things mothers and fathers do?	2 min.
III.-V.	28 min.
VI. **Provide Reinforcement/Follow-up Activity** Children select a family member and role play that person.	15 min.
VII. **View Story** *The Three Bears*—Use Videotape #6A Ask questions such as: 1. Can you name the three bears? 2. What is the name of the little girl? 3. What did Goldilocks do when she first entered the bears' house? 4. What did Goldilocks do next? 5. How did baby bear feel when he saw his cereal gone and his chair broken? 6. How did Goldilocks feel when she awoke and saw the bears standing over her?	5 min.
VIII. **Home Activity** *Mi Familia*—Use Videotape #6A	5 min.
IX. **Summary/Dismissal** Ask questions such as: 1. Who are some people who make up a family? 2. What do mothers and fathers do?	5 min.

Sample One-Week Plan of Parents' Lessons

TITLE: Giving Your Child A Good Start—Part 1	
Time	**Monday/Tuesday**
11 min.	I. **View Videotape** *My School and Classroom Environment*—Videotape #1A
2 min.	II. **Lesson Discussion** Children and parents form separate groups. 1. Videotape Review Aide models questions parents might ask their children at home. For example: A. What is the name of Mrs. Perez's friend? B. Who is Jack?
3 min.	2. Videotape Purpose Aide covers the following points: A. Adjustments children must make when beginning school. B. How parents can prepare their child for school. C. Myths associated with active parent involvement in teaching children. D. Research findings verifying the importance of individual instruction of young children.
10 min.	3. English as a Second Language Lesson Parents explore strategies for helping their child with ESL workbook activities.
30 min.	4. Discussion/Activities/Procedures Discussion question: Is your child ready for school learning? Aide leads discussion by pinpointing some of the adjustments children must make their first year of school. For example: A. Separating from family members B. Leaving familiar surroundings C. Adjusting to new schedules and routines

Sample One-Week Plan of Parents' Lessons

Time	Monday/Tuesday
	LESSON DISCUSSION continued D. Learning to get along with new schoolmates E. Following directions and rules Aide moves the discussion to ways parents can help prepare their child for school. For example: A. Use every opportunity to talk about school and what the child can expect. Parents may want to recall their own feelings about starting school. If so, ask participants to share some of these feelings with the group. B. Help the child learn skills needed at school such as: • following directions • using words rather than gestures to communicate • drawing shapes and identifying them • counting at least four objects C. Be understanding and supportive when school begins by: • relaxing the child's responsibilities at home, as well as expectations of parents • letting the child know you understand it is hard to leave friends and family • talking about positive school experiences, like making new friends, learning new games and doing important work • keeping change to a minimum at home • sharing the child's experiences with other parents

Sample One-Week Plan of Parents' Lessons

Time	Monday/Tuesday
15 min.	III. **View Story and Discuss Story Questions** *The Monster at the End of the Book*, Jon Stone, Western Publishing Company, Inc.—Videotape #1A, story section. Parents and children view the video story together, then return to separate groups. The aide illustrates the kinds of questions parents can ask their child after reading or telling them a story. For example: 1. Why was Grover afraid? 2. Who was the monster at the end of the book? The aide explains to parents how storytelling can help their child sequence ideas, increase their vocabulary and enlarge their background experiences.
5 min.	IV. **View Home Activity and Discuss Task** Parents and children view home activity together, then return to their separate groups. The aide has parents select one area they feel their child needs to develop before beginning kindergarten. Ideas and other assistance are provided to help parents develop a plan to work with their child.
5 min.	V. **Summary/Review** Aide reviews the major points of discussion. She stresses the importance of parents taking an active role in preparing their child for a positive school experience. By following some of the suggestions provided, they can be reasonably sure they are giving their child a good start in school.
5 min.	VI. **Wrap-Up/Evaluation/Dismissal** Aide asks parents to compare the behavior of a child prepared for a good start in school to one who is not. Aides may want to invite a principal or kindergarten teacher to the session to supplement the discussion and answer questions.

(Continued from page 9.)

(3) Supervision by a coordinator who monitors classroom instruction and evaluation

(4) Continuous staff development throughout the school year that focuses on techniques for working with children, parents and instructional television

(5) At least 40 hours of instruction

(6) At least 26 videotape lessons.

Financial Requirements

Per pupil cost of the ITV Project, excluding videotape developmental cost, is approximately $300 per student. A new adoption site could expect to pay $100 per lesson to purchase videotapes and materials, as well as budget $300 per student to pay for staff and support personnel. The more ITV teams in a district, the lower the cost per pupil, as only one coordinator is needed for any number of teams.

Services

Potential replicators who wish to visit various program sites are welcome by appointment. The program may be modified by school districts offering daily preschool and summer school programs. Brownsville ISD will provide consultant services to assist in implementing the program in other districts.

Educators may also be interested in the Parents as Tutors Project, implemented in 1984-85, which extended the prekindergarten program into kindergarten. Evaluation data is available.

CONTACT
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(512) 546-2433

El Arco Iris
Instructional Television (ITV) Schedule

Monday/Wednesday **Tuesday/Thursday**

8-8:30 a.m.
- Organize learning environment in school cafeteria, library, classroom or resource center

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The 90-minute lesson can be incorporated into a daily prekindergarten program, with or without parent participation. Brownsville ISD has one pilot campus, with 50 percent parent involvement.

8:30 a.m.
- Opening Exercises—Include homework check and overview of lesson

8:40 a.m.
- View ITV Lesson

9 a.m.
- Discuss ITV Lesson
  - Group I: Children
  - Group II: Parents

9:05 a.m.
- Reinforce ITV Lesson—Song, poem, fingerplay presented in videotape

9:15 a.m.
- Spanish or English lesson—Activities frequently related to videotape theme or auditory skills

9:30 a.m.
- English as a Second Language Lesson

9:40 a.m.
- Reinforce ESL Lesson—Activities frequently related to videotape theme or motor skills

9:45 a.m.

- Parents and children are grouped together for remainder of the class
- View ITV Story—Children's classic read in Spanish with a gradual transition to English as the school year progresses
- Reinforce ITV Story with questions and discussion

9:50 a.m.

- View ITV Home Activity—Provides additional reinforcement and develops fine motor skills

10 a.m.

- Summary, Evaluation and Dismissal

10:05-10:45 a.m.

- Return to ITV Resource Center and unload equipment and materials

10:45 a.m.-Noon

- Staff Development Monday through Thrusday and a half day each Friday

1 p.m.

- Repeat morning schedule with students at another school

3:30-4 p.m.

- Clerical period for instructional aides

Brownsville Independent School District
Schedule of Prekinder ITV Lessons
1984-1985

Language	Children's Lesson
Spanish/English	My School and Classroom Environment
Spanish/English	My Family
Spanish/English	Who Am I? Body Parts
Spanish/English	Taking Care Of My Body
Spanish/English	Let's Make Friends
Spanish/English	The Police Officer and Police Station
Spanish/English	Safety Using The Traffic Signal
Spanish/English	The Fire Fighter and Fire Station
Spanish/English	The Grocer and The Grocery Store
English	Halloween
Spanish/English	Fruits and Vegetables
Spanish	The Bakery
Spanish	A Visit To The Meat Market
Spanish/English	Animals On The Farm
English	Thanksgiving
Spanish/English	Introduction To Gladys Porter Zoo
Spanish	Amigoland Mall
Spanish	The Clothing Store
Spanish	The Shoe Store
Spanish/English	The Toy Store
English	Christmas—Decorating The Christmas Tree
Spanish	Christmas Customs—Las Posadas
Spanish/English	The Pet Store—Home Pets
Spanish/English	The Pet Show
Spanish	What Is A Building?
Spanish	Furniture—Rooms In My House
Spanish	Furniture—More Rooms In My House
Spanish	Air Vehicles
Spanish	Sea Vehicles
Spanish	Land Vehicles
English	St. Valentine's Day Customs

Language	Children's Lesson
Spanish	The Rodeo
Spanish	Charro Days Parade
English	A Day At The Rio Grande Valley Livestock Show and Carnival
English	St. Patrick's Day Customs
English	Customs Of Easter

Brownsville Independent School District
Schedule of Prekinder ITV Lessons
1984-1985

Language	Parent's Lesson
Spanish	Giving Your Child A Good Start—Part I
Spanish	Giving Your Child A Good Start—Part II
Spanish	Your Child's Development—Part I
Spanish	Your Child's Development—Part II
Spanish	Guiding Your Children's Behavior—Part I
Spanish	Guiding Your Children's Behavior—Part II
Spanish	Guiding Your Children's Behavior—Part III
Spanish	Guiding Your Children's Behavior—Part IV
Spanish	Are We Meeting The Basic Needs Of Children?—Part I
English	Halloween
Spanish	Fruits and Vegetables
Spanish	The Bakery
Spanish	Helping Your Child Feel Good About Himself—Part I
Spanish	Helping Your Child Feel Good About Himself—Part II
English	Thanksgiving
Spanish	Introduction To Gladys Porter Zoo
Spanish	Words, Words, Words—Part I
Spanish	Words, Words, Words—Part II
Spanish	The Shoe Store
Spanish	How Children Learn Through Play—Part I
English	How Children Learn Through Play—Part II
Spanish	Christmas Customs—Las Posadas
Spanish	The Pet Store
Spanish	The Pet Show
Spanish	What Is A Building?
Spanish	Furniture—Rooms In My House
Spanish	Furniture—More Rooms In My House
Spanish	Air Vehicles

Language	Parent's Lesson
Spanish	Sea Vehicles
Spanish	Land Vehicles
English	The Police Officer and Police Station
English	Safety Using The Traffic Signal
English	Are We Meeting The Basic Needs Of Children?—Part II
English	My Family
English	The Fire Fighter and Fire Station
Spanish	Is Your Child Afraid?—Part I
Spanish	Charro Days
English	Is Your Child Afraid?—Part II
English	Parents: The Child's Most Significant Teachers—Part I
English	Parents: The Child's Most Significant Teachers—Part II
English	Expressing Feelings—Part I
English	Expressing Feelings—Part II
English	The Grocer and The Grocery Store
English	Customs Of Easter
English	The Toy Store
English	Starting School Right—Part I
English	Starting School Right—Part II
English	Who Am I? Body Parts
English	Taking Care Of My Body
English	Let's Make Friends
English	My School and Classroom Environment

The National Diffusion Network (NDN)*

A nationwide system of some 400 successful programs. Two Texas programs recently added to the network are:

- **Houston ISD**
  Informal Science Study (grades 5-12)

  Approved March 1984
  Contact: Howard Jones (713) 749-1692

- **Weslaco ISD**
  Individualized Reading/Language Arts Instructional and Staff Development Process (minority and bilingual students, grades 1-3)

  Approved May 1983
  Contact: Richard Wubbena (512) 968-1515

The Demonstration Programs For School Improvement Network (DPSI)*

A statewide system of programs *developed in Texas* with outstanding achievement scores. It includes:

- **Austin ISD**
  Chapter 1 Prekindergarten

  Approved July 1983
  Contact: Anita Uphaus (512) 451-8411, ext. 204

  The Secretary's Initiative to Improve the Quality of Chapter I Projects: One of 118 national exemplary programs
  Approved May 1985

- **Brownsville ISD**
  El Arco Iris: A Bilingual Prekindergarten Instructional Television Project

  Approved December 1984
  Contact: Leonel Rosales (512) 546-2433

*Promoting the transfer of successful educational programs to schools that wish to improve their programs and services.

■ **Weslaco ISD**
Weslaco Training and Development Center (trainable mentally retarded students, ages 10-22)

Approved June 1984
Contact: Blanca Munoz (512) 968-1515, ext. 749

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(512) 463-9661
Texas Education Agency
For more information about the
Demonstration Programs for School Improvement Network
and the
National Diffusion Network

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26